

## SEQUENCE LISTING

University of Kentucky Research Foundation Hildebrand, David Hatanaka, Tomoko

|                           |                          | •                  |              |              |            |            |     |  |  |  |  |  |
|---------------------------|--------------------------|--------------------|--------------|--------------|------------|------------|-----|--|--|--|--|--|
| <120>                     | REC                      | OMBINANT STO       | OKESIA EPOSY | YGENASE GENE | Ξ          |            |     |  |  |  |  |  |
| <130>                     | 0502                     | 229-0377           |              |              |            |            |     |  |  |  |  |  |
| <140><br><141>            |                          | 622,774<br>3-07-21 |              |              |            |            |     |  |  |  |  |  |
| <150><br><151>            | 60/396,406<br>2002-07-19 |                    |              |              |            |            |     |  |  |  |  |  |
| <160>                     | 10                       |                    |              |              |            |            |     |  |  |  |  |  |
| <170>                     | PatentIn version 3.2     |                    |              |              |            |            |     |  |  |  |  |  |
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|                           |                          |                    | aaggtagcag   |              |            |            | 120 |  |  |  |  |  |
|                           |                          |                    | gagccccgat   |              |            |            | 180 |  |  |  |  |  |
|                           |                          |                    |              |              |            |            | 240 |  |  |  |  |  |
|                           |                          |                    | attgcttccg   |              |            |            |     |  |  |  |  |  |
|                           |                          |                    | ccttcctttt   |              |            |            | 300 |  |  |  |  |  |
|                           |                          |                    | acttagcatg   |              |            |            | 360 |  |  |  |  |  |
| cctcact                   | tggt                     | ttatgggtcc         | tcggccatga   | atgcggccat   | catgccttta | gtgagtacca | 420 |  |  |  |  |  |
| gtggati                   | tgat                     | aacgccgttg         | gattcgtcct   | ccattcggct   | ctcctcaccc | cttacttttc | 480 |  |  |  |  |  |
| ttggaaa                   | atac                     | agccatcgaa         | agcaccatgc   | aaacacaaat   | tcactcgaaa | acgaggaagt | 540 |  |  |  |  |  |
| ttacat                    | tcct                     | agaactcagt         | cccagctcag   | gacttactcc   | acatacgaat | ttcttgacaa | 600 |  |  |  |  |  |
| cacgcc                    | tggt                     | cgaatcctca         | tcttggtcat   | catgttaacc   | ttaggatttc | ctttatacct | 660 |  |  |  |  |  |
| cttaac                    | gaat                     | gtttcaggca         | agaagtacga   | tagatttacc   | aaccactttg | atccattgag | 720 |  |  |  |  |  |
| cccgat                    | cttc                     | accgagcgtg         | agcgaatcca   | ggttgcgtta   | tcagatcttg | gtatcgttgc | 780 |  |  |  |  |  |
| agtgtt                    | ttac                     | ggactcaagt         | ttcttgtaca   | aacaaaagga   | tttggttggg | tgatgtgcat | 840 |  |  |  |  |  |
| gtatgga                   | agtt                     | ccagtgatag         | gtctgaattc   | cttcattatc   | gtaatcactt | atctgcacca | 900 |  |  |  |  |  |
| cacaca                    | tctg                     | tcgtcacccc         | attacgattc   | aaccgaatgg   | aactggatca | aaggagcctt | 960 |  |  |  |  |  |
|                           |                          |                    |              |              |            |            |     |  |  |  |  |  |

| gaccacaatc gacagagatt | tcggtctcct | gaatcgggtt | ttccacgacg | ttacacacac | 1020 |
|-----------------------|------------|------------|------------|------------|------|
| ccacgtgttg caccatttgt | ttccctacat | tccacattat | catgcaaagg | aggcaagcga | 1080 |
| ggccatcaag ccaatcttgg | gtgattacag | gatgatcgac | aggactccat | ttttcaaagc | 1140 |
| aatgtggaga gaggccaagg | aatgcattta | catcgagcaa | gatgcagaca | gcaagcacaa | 1200 |
| agggacatat tggtaccata | aaatgtaatc | gatgatggag | tttagttgga | aataatgaca | 1260 |
| tgcagcatcc cttttgtatg | cttgaatcgt | tctatttctt | tatatgtttt | gtaagataaa | 1320 |
| taagtaaatc tttgagtgaa | gatggggagc | aggaaacaag | cagaatataa | tacgctaaaa | 1380 |
| aaaaaaaaaa aaaaaaaaaa | aaaaaa     |            |            |            | 1406 |

<210> 2

<211> 378

<212> PRT

<213> Stokesia laevis

<400> 2

Met Ser Asp Ser Tyr Asp Asp Arg Met Lys Asp His Asp Met Asp Glu  $1 \hspace{1.5cm} 5 \hspace{1.5cm} 10 \hspace{1.5cm} 15$ 

Arg Ala Pro Ile Asp Pro Ala Pro Phe Ser Leu Ser Asp Leu Lys Lys 20 25 30

Ala Ile Pro Ala His Cys Phe Arg Arg Ser Ala Val Trp Ser Ser Cys  $35 \hspace{1cm} 40 \hspace{1cm} 45$ 

Tyr Val Val Gln Asp Leu Ile Ile Thr Phe Leu Leu Tyr Thr Val Ala 50 55 60

Asn Thr Tyr Ile Pro His Leu Pro Pro Pro Leu Val Tyr Leu Ala Trp 65 70 75 80

Pro Val Tyr Trp Phe Cys Gln Ser Cys Ile Leu Thr Gly Leu Trp Val 85 90 95

Leu Gly His Glu Cys Gly His His Ala Phe Ser Glu Tyr Gln Trp Ile 100 105 110

Asp Asn Ala Val Gly Phe Val Leu His Ser Ala Leu Leu Thr Pro Tyr 115 120 125

| Phe        | Ser<br>130 | Trp        | Lys        | Tyr        | Ser        | His<br>135 | Arg        | Lys        | His        | His        | Ala<br>140 | Asn              | Thr        | Asn        | Ser        |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------------|------------|------------|------------|
| Leu<br>145 | Glu        | Asn        | Glu        | Glu        | Val<br>150 | Tyr        | Ile        | Pro        | Arg        | Thr<br>155 | Gln        | Ser              | Gln        | Leu        | Arg<br>160 |
| Thr        | Tyr        | Ser        | Thr        | Tyr<br>165 | Glu        | Phe        | Leu        | Asp        | Asn<br>170 | Thr        | Pro        | Gly              | Arg        | Ile<br>175 | Leu        |
| Ile        | Leu        | Val        | Ile<br>180 | Met        | Leu        | Thr        | Leu        | Gly<br>185 | Phe        | Pro        | Leu        | Tyr              | Leu<br>190 | Leu        | Thr        |
| Asn        | Val        | Ser<br>195 | Gly        | Lys        | Lys        | Tyr        | Asp<br>200 | Arg        | Phe        | Thr        | Asn        | His<br>205       | Phe        | Asp        | Pro        |
| Leu        | Ser<br>210 | Pro        | Ile        | Phe        | Thr        | Glu<br>215 | Arg        | Glu        | Arg        | Ile        | Gln<br>220 | Val              | Ala        | Leu        | Ser        |
| Asp<br>225 | Leu        | Gly        | Ile        | Val        | Ala<br>230 | Val        | Phe        | Tyr        | Gly        | Leu<br>235 | Lys        | Phe              | Leu        | Val        | Gln<br>240 |
| Thr        | Lys        | Gly        | Phe        | Gly<br>245 | Trp        | Val        | Met        | Cys        | Met<br>250 | Tyr        | Gly        | Val <sub>,</sub> | Pro        | Val<br>255 | Ile        |
| Gly        | Leu        | Asn        | Ser<br>260 | Phe        | Ile        | Ile        | Val        | Ile<br>265 | Thr        | Tyr        | Leu        | His              | His<br>270 | Thr        | His        |
| Leu        | Ser        | Ser<br>275 | Pro        | His        | Tyr        | Asp        | Ser<br>280 | Thr        | Glu        | Trp        | Asn        | Trp<br>285       | Ile        | Lys        | Gly        |
| Ala        | Leu<br>290 | Thr        | Thr        | Ile        | Asp        | Arg<br>295 | Asp        | Phe        | Gly        | Leu        | Leu<br>300 | Asn              | Arg        | Val        | Phe        |
| His<br>305 | Asp        | Val        | Thr        | His        | Thr<br>310 | His        | Val        | Leu        | His        | His<br>315 | Leu        | Phe              | Pro        | Tyr        | Ile<br>320 |
| Pro        | His        | Tyr        | His        | Ala<br>325 | Lys        | Glu        | Ala        | Ser        | Glu<br>330 | Ala        | Ile        | Lys              | Pro        | Ile<br>335 | Leu        |
| Gly        | Asp        | Tyr        | Arg<br>340 | Met        | Ile        | Asp        | Arg        | Thr<br>345 | Pro        | Phe        | Phe        | Lys              | Ala<br>350 | Met        | Trp        |

Arg Glu Ala Lys Glu Cys Ile Tyr Ile Glu Gln Asp Ala Asp Ser Lys

355 360 365

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His Lys Gly Thr Tyr Trp Tyr His Lys Met
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<400> 3
Cys His Glu Cys Gly His His Ala
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His Asp Val Thr His Thr His Val
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                                                                     26
<210> 6
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cccagctcag gacttactcc acatacg
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<212> DNA
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<400> 7
                                                                     32
gacgcgtctt cccatgtcgg attcatatga tg
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| <210> 8 <211> 37 <212> DNA <213> Artificial Sequence   |      |            |            |            |            |            |      |  |  |  |  |
|--|------|------------|------------|------------|------------|------------|------|--|--|--|--|
| <220> <223> Artificial StexpR primer of unknown origin |      |            |            |            |            |            |      |  |  |  |  |
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| caattca  | aaat | ctggaaatat | taattggatc | aagcgggcgg | atatgatgat | gtcggattca | 120  |  |  |  |  |
| tgtgatq  | gatc | atgatcagct | ggtgaaagat | gatcataata | taaacgaacg | tgcaccggtt | 180  |  |  |  |  |
| gatgcg   | gcac | cattctcgtt | aagcgatcta | aagaaagcaa | tccctccgca | ttgcttccag | 240  |  |  |  |  |
| cgatct   | gcca | tccgttcatc | gtgctacgtt | gttcaggatc | tcattattac | cttcctttta | 300  |  |  |  |  |
| tacacgo  | ctcg | ccaactctta | cattcctctt | cttcctcctc | ctctacctta | cttagcatgg | 360  |  |  |  |  |
| cctgttt  | tact | ggttttgcca | atcttcgatc | ctcactggtt | tatgggtcat | tggccatgaa | 420  |  |  |  |  |
| tgtggc   | catc | atgcttatag | tgagtaccag | tgggttgata | acaccgttgg | attcatcctc | 480  |  |  |  |  |
| cattcct  | tttc | ttctcacacc | ttacttttct | tggaaataca | gccatcgaaa | gcaccatgcc | 540  |  |  |  |  |
| aacacga  | aatt | cactcgaaaa | cgaggaggtt | tacattccta | aagccaagtc | ccagctcágg | 600  |  |  |  |  |
| aattact  | tcca | atttcaaatt | tcttgacaac | acccctggtc | gaatcttcat | tttgcttatc | 660  |  |  |  |  |
| atgttga  | acct | tgggctttcc | tttatacctc | ttgaccaata | tttcaggcaa | gaaataccaa | 720  |  |  |  |  |
| aggttt   | gcca | accactttga | tccgttgagc | cccatcttca | gtgagcgtga | acgaatccag | 780  |  |  |  |  |
| gtcgtg   | ctat | cggatgtggg | tctcattgct | gtgttttacg | ggcttaagtt | tcttgtagcg | 840  |  |  |  |  |
| aaaaaa   | gggt | tcggttgggt | aatgcgcatg | tacggagccc | cagtggttgg | gctgaatgcc | 900  |  |  |  |  |
| ttcataa  | ataa | tgatcactta | tctccaccac | acccatctgt | cttcgcctca | ttacgattcg | 960  |  |  |  |  |
| accgaat  | tgga | actggatcaa | aggagccttg | actacaatcg | atagagattt | cggtctcctg | 1020 |  |  |  |  |
| aatagg   | gtgt | tccatgacgt | cactcacaca | cacgtgttgc | atcatttgtt | cccgtacatt | 1080 |  |  |  |  |
| ccacatt  | tatc | atgcaaagga | ggcgagcgac | gcaataaagc | cggtgttagg | ggagtatcgg | 1140 |  |  |  |  |

| atgatcgata | ggactccgtt | ttacaaagca | atgtggagag | aggcgaagga | atgcatctac | 1200 |
|------------|------------|------------|------------|------------|------------|------|
| atcgagccag | atgaagataa | gaagcacaaa | ggtgtatatt | ggtaccataa | aatgtgatac | 1260 |
| gagctgagta | cgtagtacgt | tgtatgcttt | tgtaacgttt | tgtaagataa | ataaataaat | 1320 |
| cttgaatgaa | gataaaaaaa | aaaaaaaaa  | aaaaaaaaa  | aaaa       |            | 1364 |
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<211> 1344

<212> DNA

Crepis palaestina

<400> 10

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| ttaaataata | tcggtatgat | gtgtaatgaa | agtatgtggt | tgtctggttt | tgttgctatg | 1320 |  |
|------------|------------|------------|------------|------------|------------|------|--|
| aaagaaagta | tgtggttgtc | ggtc       |            |            |            | 1344 |  |

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